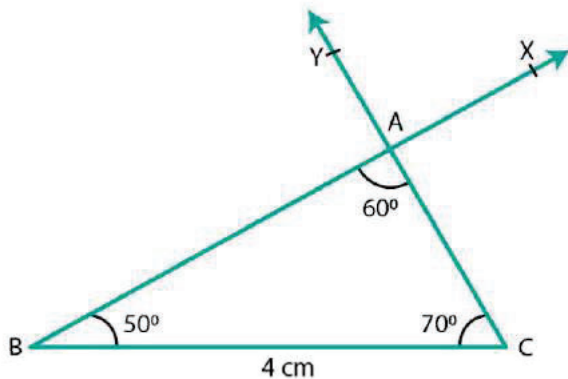


EXERCISE 17.4

PAGE NO: 16.3

1. Construct $\triangle ABC$ in which $BC = 4$ cm, $\angle B = 50^\circ$ and $\angle C = 70^\circ$.

Solution:

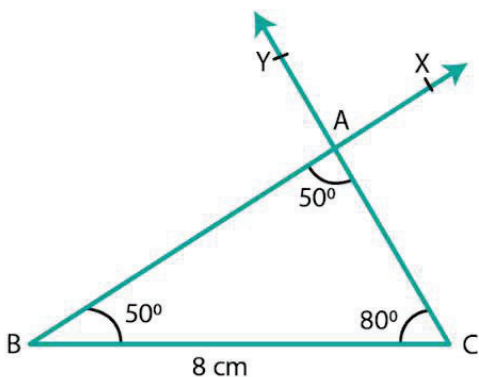


Steps of construction:

1. Draw a line segment BC of length 4 cm.
2. Draw $\angle CBX$ such that $\angle CBX = 50^\circ$.
3. Draw $\angle BCY$ with Y on the same side of BC as X such that $\angle BCY = 70^\circ$.
4. Let CY and BX intersect at A.
5. ABC is the required triangle.

2. Draw $\triangle ABC$ in which $BC = 8$ cm, $\angle B = 50^\circ$ and $\angle A = 50^\circ$.

Solution:



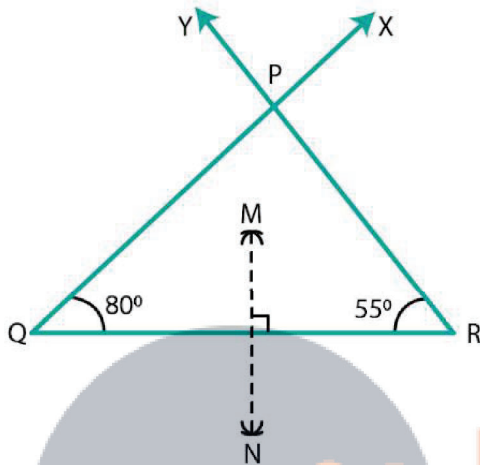
Steps of construction:

1. Draw a line segment BC of length 8 cm.
2. Draw $\angle CBX$ such that $\angle CBX = 50^\circ$.

3. Draw $\angle BCY$ with Y on the same side of BC as X such that $\angle BCY = 80^\circ$.
4. Let CY and BX intersect at A.

3. Draw $\triangle ABC$ in which $\angle Q = 80^\circ$, $\angle R = 55^\circ$ and $QR = 4.5$ cm. Draw the perpendicular bisector of side QR.

Solution:

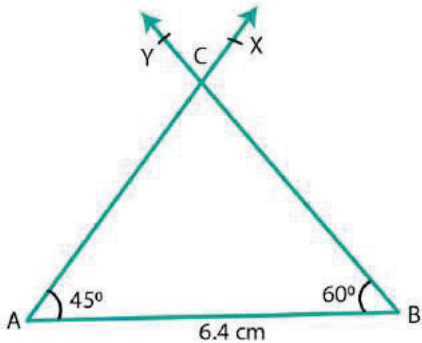


Steps of construction:

1. Draw a line segment $QR = 4.5$ cm.
2. Draw $\angle RQX = 80^\circ$ and $\angle QRY = 55^\circ$.
3. Let QX and RY intersect at P so that PQR is the required triangle.
4. With Q as center and radius more than 4.5 cm, draw arcs on either sides of QR.
5. With R as center and radius more than 4.5 cm, draw arcs intersecting the previous arcs at M and N.
6. Join MN
7. MN is the required perpendicular bisector of QR.

4. Construct $\triangle ABC$ in which $AB = 6.4$ cm, $\angle A = 45^\circ$ and $\angle B = 60^\circ$

Solution:

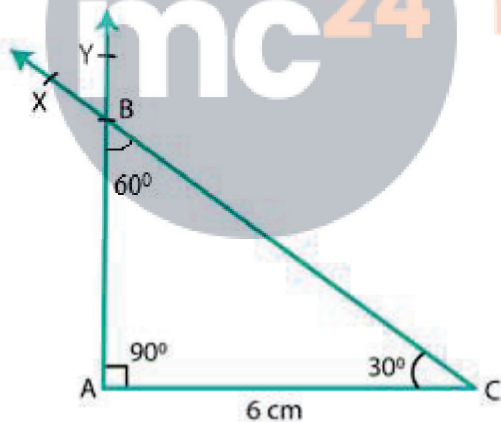


Steps of construction:

1. Draw a line segment $AB = 6.4$ cm.
2. Draw $\angle BAX = 45^\circ$.
3. Draw $\angle ABY$ with Y on the same side of AB as X such that $\angle ABY = 60^\circ$.
4. Let AX and BY intersect at C.
5. ABC is the required triangle.

5. Draw $\triangle ABC$ in which $AC = 6$ cm, $\angle A = 90^\circ$ and $\angle B = 60^\circ$

Solution:



Steps of construction:

1. Draw a line segment $AC = 6$ cm.
2. Draw $\angle ACX = 30^\circ$.
3. Draw $\angle CAY$ with Y on the same side of AC as X such that $\angle CAY = 90^\circ$.
4. Join CX and AY. Let these intersect at B.
5. ABC is the required triangle where angle $\angle ABC = 60^\circ$.